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Survey of factors related to criminal behavior in a sample of Iranian substance abusers



Omid Mehrpour, MD Forensic Med Specialist, Assistant Professor^{a,b},
 Parissa Karrari, MD Researcher^{a,b},
 Ardeshtir Sheikhezadi, M.D. Forensic Medicine Specialist, Professor of Forensic Medicine^{c,*}

^a Medical Toxicology and Drug Abuse Research Group, Birjand University of Medical Sciences, Birjand, Iran^b Department of Clinical Toxicology and Forensic Medicine, Faculty of Medicine, Birjand University of Medical Sciences, Ghaffari Avenue, Birjand 97175-379, Iran^c Department of Forensic Medicine, School of Medicine, Tehran University of Medical Sciences, Poursina St., Keshavarz Blvd., Tehran, Iran

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ABSTRACT

Objectives: Many countries including Iran have a high rate of substance abuse. It is essential for public health and law enforcement strategies to know the causes and consequences of substance abuse and its relation to crimes.

Methods: In a prospective case–control study, covering a period of one year starting from March 21, 2010, 125 cases with criminal behavior and 125 cases with no history of criminal behavior were studied.

Results: Eight percent of our studied population had a previous history of psychological disorder. Most of our cases were cigarette users (78.4%). Forty-two cases had a history of alcohol abuse (16.8%). Modern drugs were the most common type of drugs (56%) being used. Multivariate analysis using logistic regression revealed that criminal behavior was correlated with divorce (RR = 5.35; 95% CI = 1.59–16.01; $P = 0.023$), history of alcohol use (RR = 2.63; 95% CI = 1.11–6.22; $P = 0.027$), history of psychological disorder (RR = 4.97; 95% CI = 1.44–17.20; $P = 0.011$), Modern drug use (RR = 4.86; 95% CI = 2.01–11.76; $P = 0.001$) and starting drug abuse at an early age (RR = 0.94; 95% CI = 0.88–0.99; $P = 0.03$).

Conclusions: Risk factors for criminal behavior among substance abusers include being divorced, history of alcohol abuse, history of psychological disorder, modern drug abuse and starting drug abuse at an early age.

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1. Introduction

Substance abuse is one of the most important and preventable health hazards worldwide. Iran has a noticeable role in the transit of opium and other drugs from Afghanistan to western countries.^{1–3}

In western countries, alcohol, cannabis, methamphetamine and heroin are the most common drugs⁴; however in Iran, opium is the most used drug.⁵

Substance abuse is a multidimensional problem; substance abuse and crimes reflect a wide range of complex social and psychological reasons.⁶

Abuse alcohol and other drugs increases crimes directly through the use and sale of illicit drugs and indirectly through the effects of drugs on crimes associated with compulsive drug seeking. Moreover, some studies show a narcotic–crime relationship and suggest that evaluation of this relationship can help us to decrease psychological problems in substance abusers. Unfortunately, few studies have evaluated factors related to substances abusers who have criminal history in non-western countries. As such, the present study sought to fill this research gap by employing a case–control design to identify factors increasing criminal behavior of substance abusers in the eastern region of Iran.

2. Materials & methods

Birjand University of Medical Sciences Review Board approved the ethical aspects of this prospective study concerning the relation between criminal behavior and substance abuse in Birjand, the capital of the Southern Khorasan province. This

* Corresponding author. Department of Forensic Medicine, Faculty of Medicine, Tehran University of Medical Sciences, Poursina St., Keshavarz Blvd., Tehran 1417613151, Iran. Tel.: +98 21 22126039, +98 912 2890395 (mobile); fax: +98 21 66405588.

E-mail addresses: ardeshirsheikhezadi@yahoo.com, sheikhezadi@tums.ac.ir (A. Sheikhezadi).

study took one year, starting from March 21, 2010 to March 21, 2011. The province of Southern Khorasan is located in the eastern region of the country. The capital of that Province, Birjand, is an agricultural Province with an estimated population of approximately 636,640, with a low-income socioeconomic status representing the majority of the people. There are seven addiction treatment centers in Birjand. Three are public and the others are private (Naji, Shafa, Rahayee, Nedaye salamat). Samples were selected based on the time of referral to addiction treatment centers. Data was collected in a predesigned questionnaire, being completed by a research assistant who was blind to the outcome of the analysis, while he was the consultant of the clinics. Questionnaires documented demographic data, which included abuser's age, gender, marital status, occupation, education level, type of used drugs, route of use, and the onset of drug consumption.

In a case–control study, we studied 125 substance abusers admitted to clinics with a history of criminal behavior as the case group and after matching their gender and age, we chose 125 cases with no criminal behavior history as the control group. Criminal histories based on self-administrated questionnaires consisted of stealing, drug trafficking, illegal sexual relationship and disorderly conduct. Iran is an Islamic republic and sexual relationship outside the marriage is illegal and has severe penalties. In this study, illicit drugs are divided into three groups: traditional drugs (Opium, Shireh, or both); new drugs (Crystal with heroin base, alone or combined with other drugs); and other drugs such as Cannabis, Illegal Methadone, Tramadol, and Diphenoxilate. Data was coded and analyzed using SPSS version 16. The relationship between variables was examined using Chi-square and Logistic regression test.

3. Results

Between March 21, 2010 and March 21, 2011, 125 cases with criminal behavior and 125 cases with no history of criminal behaviors, totally 250 subjects (232 males and 18 females) were included in this study. Most of the cases were living in the urban areas (97.2%). Nearly two third of the cases were married ($n = 156$, 62.4%) followed by single ($n = 70$, 28%) and divorced ($n = 24$, 9.6%). Middle school education was the most common education level ($n = 100$, 40%), while just 8% of the cases had college education.

The self-employed represented the largest group (46.8%), followed by the unemployed (27.2%), the students (3%) and office workers (4.4%). Eight percent of the cases had a previous history of mental disorder. Most of the cases were cigarette user (78.4%). Forty-two cases had a history of alcohol abuse (16.8%). Modern drugs were the most commonly abused drugs (56%), followed by traditional drugs (37.6%) and other drugs which were minimally abused. Seventy-seven cases revealed more than a single administration route for drug abuse (30.8%). The most common route of drug abuse in our study was smoking ($n = 115$, 46%) followed by ingestion (20.4%). There was a significant difference between the case group and control group in terms of marital status ($P = 0.02$), occupation ($P = 0.01$), education level ($P = 0.02$), history of cigarette use ($P = 0.002$), history of alcohol abuse ($P = 0.002$), history of mental disorder, form and route of substance abuse ($P = 0.01$). However, there were no significant differences between the two groups in terms of place of residence (Table 1). Multivariate analysis by logistic regression revealed that criminal behavior was correlated with divorce (RR = 5.35; 95% CI = 1.59–16.01; $P = 0.023$); history of alcohol abuse (RR = 2.63; 95% CI = 1.11–6.22; $P = 0.027$); history of mental disorder (RR = 4.97; 95% CI = 1.44–17.20;

Table 1
Characteristics of case group and control group.

Items		With criminal history $N = 125$	No criminal history $N = 125$	Odds ratio	Confident interval	P-value
		Number (Percent)	Number (Percent)			
Education	Illiterate	6(4.8%)	7(5.6%)	3.43	0.73–16.09	$P = 0.028$
	Primary school	32(25.6)	33(26.4)	3.88	1.17–12.86	
	Middle school	59(47.2)	41(32.8)	5.76	1.79–18.47	
	Pre university	24(19.2)	28(22.4)	3.43	1.01–11.66	
	College education	4(3.2)	16(12.8%)	1	–	
Marital statue	Single	44(35.2)	26(20.8)	1	–	$P < 0.0001$
	Married	63(50.4)	93(74.4)	2.49	1.39–4.46	
	Divorced	18(14.4)	6(4.8)	4.43	1.67–11.77	
Occupation	Student	3(2.4)	5(4)	–	–	$P = 0.014$
	House wife	9(7.2)	9(7.2)	–	–	
	Self employee	53(42.4)	64(51.2)	–	–	
	Worker	16(12.8)	12(9.6)	–	–	
	Office Employee	1(0.8)	10(8)	–	–	
	Unemployment	43(34.4)	25(20)	1.91	1.12–3.24	
Smoking history	With smoking history	108(86.4)	88(70.4)	2.67	1.41–5.06	$P = 0.002$
	Without smoking history	17(13.6)	37(29.6)	1	–	
Alcohol use history	With Alcohol history	30(24)	12(9.6)	2.97	1.44–6.13	$P = 0.002$
	Without Alcohol history	95(76)	113(90.4)	1	–	
	Total	125(100)	125(100)			
Form of substance use	Traditional drugs	26(20.8)	68(54.4)	1	–	$P < 0.0001$
	Modern Drugs	92(73.6)	48(38.4)	5.01	2.83–8.87	
	Other drugs	7(5.6)	9(7.2)	2.03	0.69–6.03	
Route of abuse	Smoking	66(52.8)	49(39.2)	1	–	$P = 0.010$
	Ingestion	15(12)	36(28.8)	0.31	0.15–0.63	
	Intra venous	4(3.2)	3(2.4)	0.99	0.21–4.63	
	Combination of two or more route	40(32)	37(29.6)	0.8	0.45–1.43	
Place of residence	Urban	122(97.6)	121(96.8)	1.34	0.29–6.13	$P = 1.000$
	Rural	3(2.4)	4(3.2)	1	–	
Previous history of Mental disorder	With history	15(12)	5(4)	27/3	1.15–9.30	$P = 0.02$
	Without history	110(88)	120(96)	1	–	
Mean age		33.46 ± 9.83	34.52 ± 8.85			$P = 0.3$
Mean age of beginning substance use		0.464 ± 19.13	0.7.29 ± 22.49	0.90	0.86–0.95	$P < 0.0001$

$P = 0.011$), Modern drug abuse ($RR = 4.86$; 95% $CI = 2.01$ – 11.76 ; $P = 0.001$) and the age of starting drug abuse ($RR = 0.94$; 95% $CI = 0.88$ – 0.99 ; $P = 0.03$) (Table 2).

4. Discussion

When drugs are more available, the society becomes less sensitive to the vicious cycle of dependency and the related crimes. To our knowledge, this is the first national epidemiological study examining factors related to criminal behavior among substance abusers in Iran.

Demographically, findings indicated that the prevalence of criminal behavior was greater among individuals with a divorced status, lower education, alcohol and cigarette consumption, history of psychological disorder and unemployment; which is correlated with income and price of modern drugs such as Iranian crystal, Iranian crack and also route of drug abuse. However, we found no significant relationship between victimization and place of resident. After multi-variation regression analysis, it was revealed that divorce, history of alcohol abuse, history of psychological disorders, abuse of modern drugs, and early age of starting drug abuse are stronger factors related to heightened exposure to risk of criminal behavior.

In Iran, crystal is referred to as “crack,” a misunderstanding of the American slang for cocaine-rocks so it is more appropriate to be called Iranian crack which mainly contains Heroin.³

In our study, illegal drugs were divided into three groups. The consumptive pattern of abuse is variable in different parts of the world. In Asia, opium and cannabis have been the most commonly abused drugs for decades.⁷ Opium has been used in Iran for approximately 300 years.¹ It is known that heroin, cannabis and crack (with cocaine base) are the most abused drugs in North America, while in European countries, cannabis, heroin, amphetamine and Ecstasy

(MDMA; 3,4-Methylenedioxymethamphetamine) are the main abused drugs.^{7,8} These drugs have been used for decades in these countries, but are new for Iranian population.⁵

The main reasons for drug abuse variation in different parts of the world are due to economics, and geographic locality. A changing pattern from opium smoking to heroin injection is a documented trend in South and East Asia⁹ given this close prevalence between traditional and new drug abuse, it seems that the general population of substance abusers in this area has shifted from opium to crystal (heroin).

Drug abusing may increase criminal behavior and victimization. Surveys suggest that there is a narcotics–crime relationship, assuming that criminality may indeed be a pre-addiction phenomenon, or perhaps chronic use of narcotics, cocaine, and other illicit drugs bring about a change in the intensity and frequency of illegal acts. Furthermore, drug transactions often involve conditions and persons that may increase environmental risks of criminal behaviors.¹⁰

Crime and unemployment: Poverty consists of economic dependency, unemployment and debt. There is surely a relationship between unemployment and crime. More than 50% of youngsters during committing crimes did not have any occupation.¹¹ Although alcohol and substance abuse tend to cause poverty, either directly abusing or trafficking drugs/alcohol or indirectly investing in these fields tend to cause crimes.⁹

Alcohol and crime: Studies of drugs/alcohol victimization suggest a close relationship between substance abuse (predominantly alcohol) and risk of criminal victimization.¹⁰ Relationship between alcohol and crime may be due to violence and anger. The Home Office Arrest survey showed a high proportion of people feeling anger after drinking alcohol although not committing any crimes.¹¹

Substance abuse and crime: Studies have indicated that drug abuse is more prevalent among crime victims compared to those with no criminal history.¹² Imprisonment and drug abuse are both two complex phenomenon, increasing the prevalence of addiction and criminal behavior in society. Studies revealed that from every two addicted men to street drugs, one of them has experienced substance abuse in jail.¹³ Causes that increase the possibility of criminal victimization are alcohol, stimulants, opioids, cocaine and heroin abuse/dependence.¹⁰

Mental health disorder and crime: Epidemiological studies have shown that between 30% and 60% of people with drug problems are diagnosed with mental health disorders including personality disorder, major depression, schizophrenia and bipolar disorder.¹⁴ There are studies which confirm our findings which is those with co-morbid substance abuse and mental health disorders are in high risk of criminal victimization compared to those with only substance abuse disorder.¹⁰

5. Limitations of the study

There are several limitations involved in this study which must be addressed. Initially, although a relatively suitable sample size of 250 was studied, our study was confined to a limited region. Therefore, generalization of the results must be dealt with caution and continued researches should include larger sample sizes to draw more accurate conclusions. Another limitation is the data being cross-sectional. We didn't have access to the data clarifying which one occurred first; tendency to drug or criminal behavior, and also in which stage of dependency the crime was committed; initiation, dependency, withdrawal, or during the treatment.

Legal Medicine Organization of Iran with about 1.5 million forensic referrals per year can be an appropriate field for such researches.^{15–34}

Table 2

Comparison between case group and control group with multi-variation analysis by logistic regression.

Items	Odds ratio	Confident interval 95%	P-value
Marital status			$P = 0.023$
Single	1	—	
Married	1.26	0.62–2.54	
Divorced	5.35	1.59–16.01	
Education status			0.159
Illiterate	7.14	1.04–48.88	
Primary school	4.05	0.96–17.10	
Middle school	4.77	1.17–19.49	
Pre university	2.70	0.63–11.61	
College education	1	—	
Occupation			0.987
With job	1	—	
Unemployment	1.01	0.51–1.97	
History of smoking			0.145
With history	1.75	0.82–3.73	
Without history	1	—	
History of Alcohol use			0.027
With history	2.63	1.11–6.22	
Without history	1	—	
History of mental disorder			0.011
With history	4.97	1.44–17.20	
Without history	1	—	
Form of substance use			0.001
Traditional drugs	1	—	
Modern drugs	4.86	2.01–11.76	
Other drugs	1.37	0.34–5.49	
Route of drug use			0.912
Smoking	1	—	
Ingestion	1.39	0.49–3.89	
Intra venous	0.76	0.11–5.01	
Combination	1.16	0.55–2.46	
Age of beginning drug use	0.94	0.88–0.99	0.03

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None declared.

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